



THE UNIVERSITY OF
MELBOURNE

Faculty of
Science

Science for the World

2030 Strategy



Contents

Acknowledgement of Country	3
From the Dean, Professor Moira O'Bryan	4
University of Melbourne <i>Strategy 2030</i>	5
<i>Science for the World 2030 Strategy</i>	6
Disciplinary excellence	7
Purpose, vision and values	8
Research excellence	10
Outstanding education	14
Diversity and inclusion	18
Indigenous	22
Environment and sustainability	26
Future-ready infrastructure	28
Global engagement	30

Cover artwork

Always, by artist Kirsten Clark, reflects the deep connection and knowledge Indigenous people have always had to the land, water and skies.

This artwork includes design elements related to all schools in the Faculty of Science, including weather, environment, flora, fauna and astronomy.

Artist bio

Kirsten Clark is a proud Yindinji woman from Northern Queensland. She is a self-taught artist creating artworks in multiple mediums including pencil, fine markers, chalk and paint.

science.unimelb.edu.au/about/always



Acknowledgement of Country

The Faculty of Science acknowledges the Traditional Owners of the unceded land on which we work, learn and live: the Wurundjeri Woi-wurrung and Bunurong peoples (Burnley, Parkville and Werribee campuses), the Yorta Yorta Nation (Dookie campus) and the Dja Wurrung people (Creswick campus).

We are grateful to the Traditional Owners, Elders and Knowledge Holders of all Indigenous nations and clans who have been instrumental in our reconciliation journey.

Aboriginal and Torres Strait Islander peoples are Australia's first scientists, with deep and enduring knowledge of the land, waters, and skies.

We recognise the unique place they hold as the original owners and custodians of the lands and waterways across the Australian continent, with histories of continuous connection dating back more than 60,000 years. We also acknowledge their enduring cultural practices of caring for Country.

We pay respect to Elders past, present and future, and acknowledge the importance of Indigenous knowledge. As a community of researchers, educators, professional staff and students, we are privileged to work and learn every day with Indigenous colleagues and partners.

From the Dean, Professor Moira O'Bryan



I am pleased to share *Science for the World*, our 2030 strategy. The Faculty of Science is entering a defining period. This strategy brings together our core strategic commitments – the articulation of our purpose, vision and values, the creation of our research and education strategies, and the development of an integrated suite of strategic priorities.

Together, they form our shared direction to 2030 and align our focus with the University's *Strategy 2030*.

This strategy has been developed by staff, students and stakeholders across all areas and levels of our diverse and vibrant Faculty and the University community. It reflects our collective aspirations, expertise and commitment to benefiting society and the world around us through transformative education, research and engagement.

Our momentum is building. Standing on a proud history of excellence and innovation, we are expanding the scale and impact of our research, education, and engagement to meet the challenges ahead.

We are recognised internationally for our leadership across many scientific disciplines, for providing an outstanding education for our students and for fostering a vibrant, collaborative culture deeply engaged with local and global partners.

Comprising seven schools that span the core scientific disciplines, our Faculty is an international leader in research and innovation, and plays a central role in Australia's participation in the global knowledge economy. Our strategies reflect our strengths, opportunities, and the potential for positive impact. The goals are underpinned by exceptional skill, ambition and an unwavering commitment to excellence.

I would like to thank the many colleagues and students who have contributed to this work. It reflects your passion, curiosity and skill, and your commitment to transformative discovery and applied research.

A handwritten signature in blue ink, appearing to read 'Moira O'Bryan'. The signature is fluid and stylized, with a prominent loop at the end.

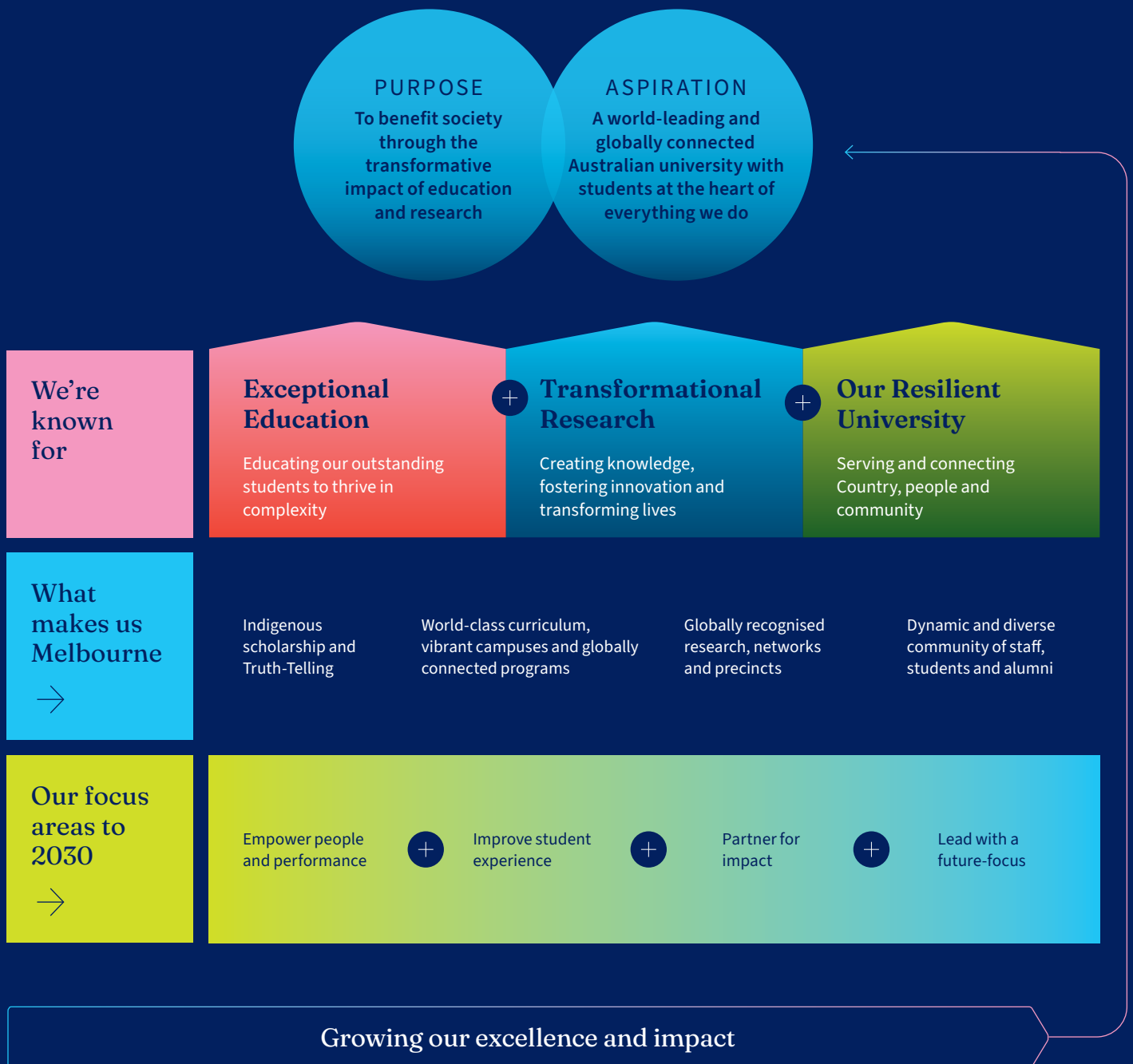
Professor Moira O'Bryan
Dean, Faculty of Science, University of Melbourne

University of Melbourne Strategy 2030

The University of Melbourne's *Strategy 2030* commits us all to exceptional education, transformational research and resilience.

The Faculty of Science plays a critical role in sustaining the University's leading status, outstanding impact, financial endurance, and deep community connections. A major contributor to education and research, *Science for the World*

also outlines our contribution to the University's resilience through strategic priorities across key portfolios: *Diversity and inclusion, Indigenous, Environment and sustainability, Infrastructure, and Global engagement.*



Science for the World 2030 Strategy

Science for the World outlines our ambition, purpose, excellence and focus as the Faculty navigates the next five years and builds a strong future.

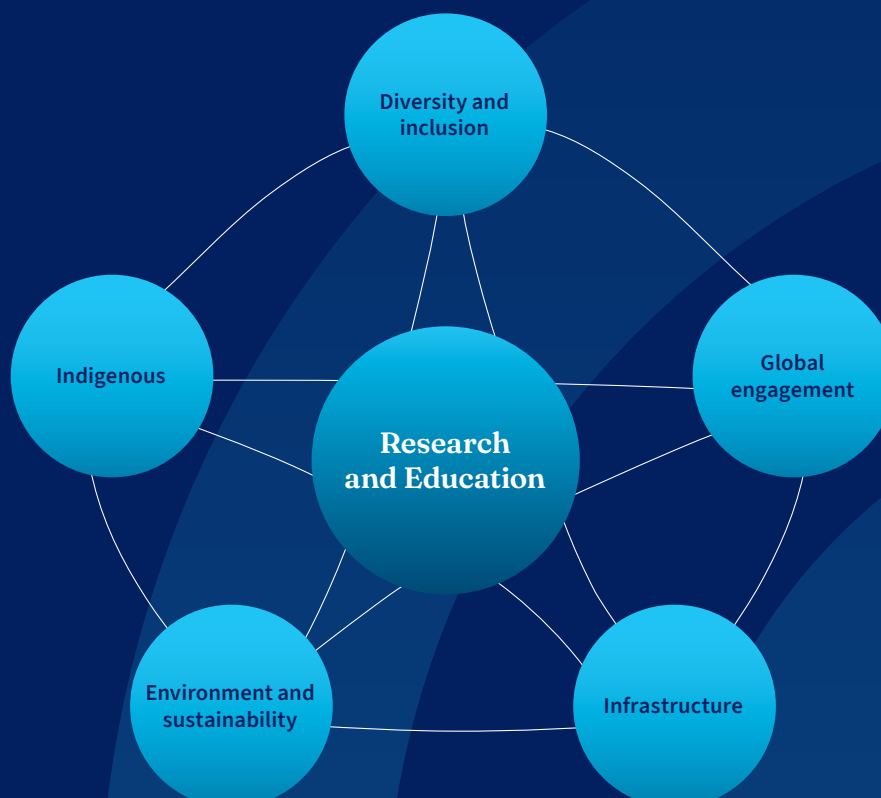
Our strategy is centred around our core purpose of research and education. It articulates our commitment to be even more outstanding, inclusive, and impactful. Our communities and their experience are at the forefront of what comes next for the Faculty and the impact we can have.

Our strategic priorities outline how we will focus our collective effort alongside, and in support of, our pursuit of research and education excellence. They ensure that we are equally ambitious for our Faculty's culture, built environments, stakeholder relationships, diverse knowledge systems, and positive societal change.

We will continue to be world-leading within and across disciplines, demonstrating excellence and innovation. We strive to undertake the highest quality fundamental and translational research which forms the foundation of our educational offering. We are training the next generation of leaders to address major global challenges.

The Faculty of Science will lead with a focus on:

- Diversity and inclusion – Driving greater equity in recruitment, promotions and leadership, and greater inclusion in workplace culture and teaching practices.
- Indigenous – Building respectful, reciprocal partnerships with communities, and recognising the ingenuity of Indigenous science in our teaching and research.
- Environment and sustainability – Advancing research focused on climate change, biodiversity loss and the energy transition, while supporting sustainable practices on our campuses.
- Future-ready infrastructure – Operating on five of the seven University campuses, ensuring sustainable and flexible infrastructure, and world-class facilities.
- Global engagement – Building our international reputation as a globally-connected, trusted science partner, and future-proofing student acquisition.



Disciplinary excellence

Our Faculty's disciplinary excellence is the key to discovery, answering the big questions about the universe, our world and our place in them.

Our scientists are global leaders in their fields, spanning a wide breadth of disciplines and more than 50 areas of specialisation. They are driven by a shared commitment to finding answers to the most significant fundamental questions, while educating and inspiring the next generation for our shared future.

Our research, education and engagement with the public, industry and policymakers are inextricably linked – and our combined efforts accelerate our impact. These disciplinary strengths are not silos; they are the distinct engines that power our ability to solve our six global challenges (detailed on page 11).



Photo by Aman Chokshi. A rare lunar eclipse, auroras and the Milky Way galaxy over the South Pole Telescope.

Purpose, vision and values

Our purpose, vision and values guide the Faculty's direction, how we approach our work, and how we achieve our goals as a collective. They were developed by staff and students across all areas and levels and provide us with a shared understanding of our expectations and aspirations.



Purpose

Our Faculty's enduring purpose is to benefit society and the world around us through transformative education, research and engagement.



Vision

We strive to be a world-leading, locally and globally connected Faculty of Science with education and research at the heart of everything we do.



Values

Curiosity

Our pursuits are underpinned by a commitment to innovation and creativity.

- We embrace critical inquiry to challenge our assumptions and the status quo, even when it is difficult or uncomfortable.
- We ask questions of ourselves, others, and the world around us to seek out new perspectives and knowledge.
- We welcome new insights, different perspectives and outcomes.

Impact

We wholeheartedly embrace our responsibilities to society and the world around us.

- We are dedicated to educating the next generation of leaders for positive change.
- We strive to deliver meaningful public good and improve outcomes for humans, animals and our wider ecosystem through science.

Excellence

Our work is underpinned by the highest standards, quality and rigour.

- We strive to deliver world-leading education and research by applying and challenging standards.
- We have a sustained commitment to academic freedom.
- Excellence is achieved through a diversity of background, thought and perspective.
- We collaborate with partners to enhance quality and impact.

Integrity

We are committed to mutual respect, honesty and integrity in all that we do.

- We take actions conscientiously and ensure our behaviours are guided by our unwavering commitment to the Faculty's values.
- We promote an inclusive environment for all.
- We are committed to promoting transparency and inclusive decision-making.

Research excellence

The Faculty's Research Strategy defines our areas of strength and future aspirations for growth. It identifies opportunities to answer fundamental questions and solve global challenges, and it defines our priority pathways to impact.

Research is a driving purpose for the Faculty and University with the constant goal to impact the world positively through discovery, knowledge and innovation. We are at the forefront of scientific discovery, and – whether theoretical or applied – these learnings will be leveraged for the betterment of the world, humanity and industry.

Priorities

- Attract and retain a diverse cohort of outstanding researchers from around the world and nurture their research careers.
- Advance research through fundamental discovery, targeted investment, partnerships and the enhancement of a vibrant, ambitious and collegial research culture.
- Drive cross-disciplinary collaboration through the purposeful development of research networks.

Six big challenges for society and the world

The Research Strategy identifies six big challenges where expertise and cross-disciplinary collaborative opportunities within and beyond the Faculty have the potential to create transformational impact for our world. Addressing these is enabled by progress in fundamental science and building on our foundations of excellence through our diversity, facilities and capability, engagement and research translation.

We are committed to maintaining a thriving culture of fundamental discovery science and supporting emerging scientists to future-proof against the next generation of big challenges.





Healthy, sustainable and just food systems

We bring our expertise in agriculture and food systems, food security and biosecurity, functional foods and human nutrition to create new knowledge in food systems locally and across the world.



Knowledge and solutions for a healthy planet

We bring our expertise in sustainable cities, natural resources, pollution and Indigenous knowledge, as well as decision support and data analysis to find solutions for a healthy planet.



Understanding and adapting to climate change

We bring our expertise in modelling the past, present and future of Earth's climate, together with technological, social and nature-based solutions to collaborations that aid understanding climate change impacts and foster adaptation.



Understanding, respecting and conserving biodiversity

We bring our expertise in measurement and modelling of environmental change, as well as an understanding of socioecological systems and the complementarity of Indigenous knowledge and Western science to collaborations that promote biodiversity.



Understanding and improving human and animal health

We bring our expertise in understanding molecular mechanisms, lifecycles and the interconnections between human health, animal health and the environment, as well as the diagnosis, treatment and prevention of diseases of animals, people and ecosystems.



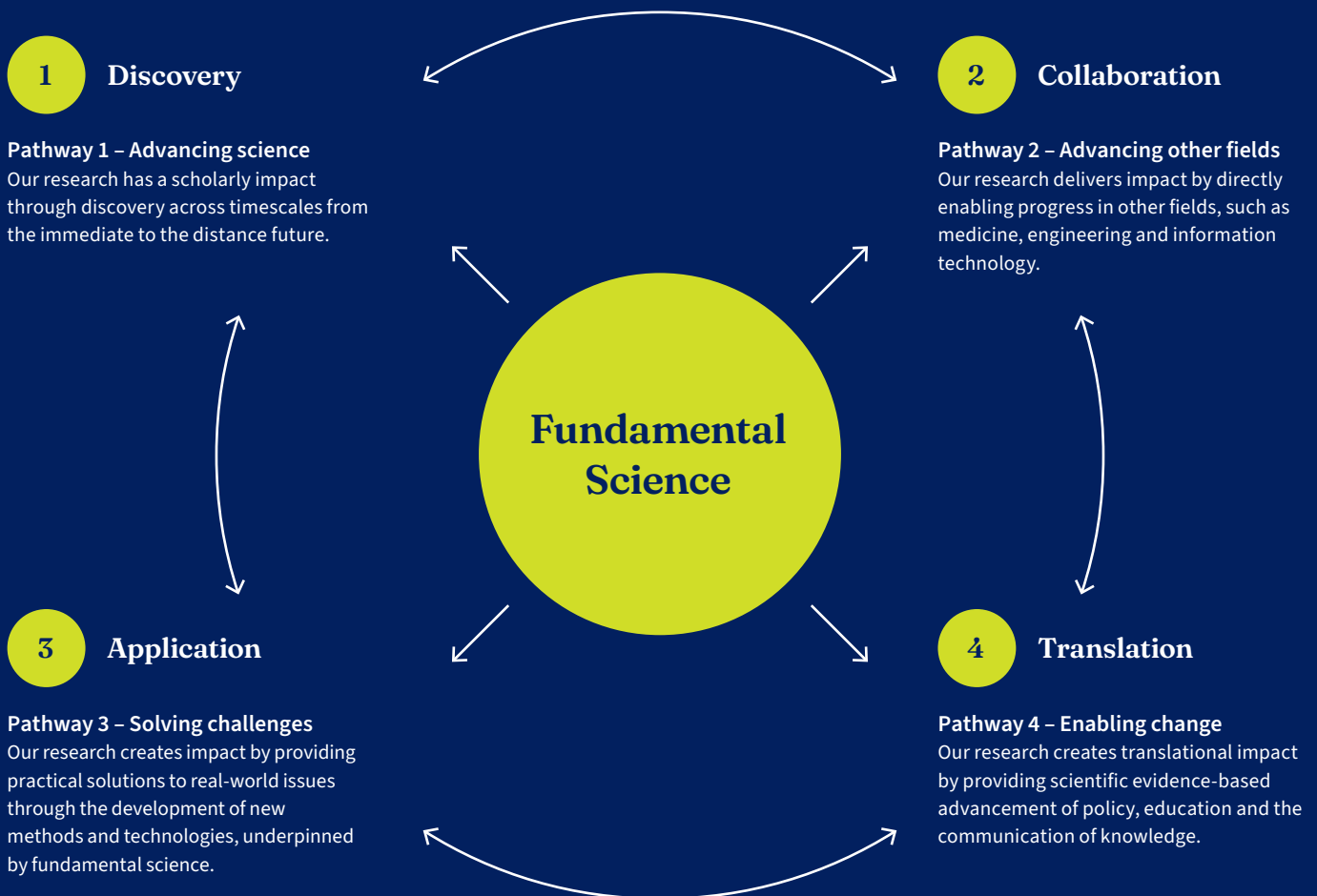
Enabling a renewable energy future

We bring our expertise in materials, safety of energy infrastructure, climate, earth systems science, and geological resources to build the renewable energy future.

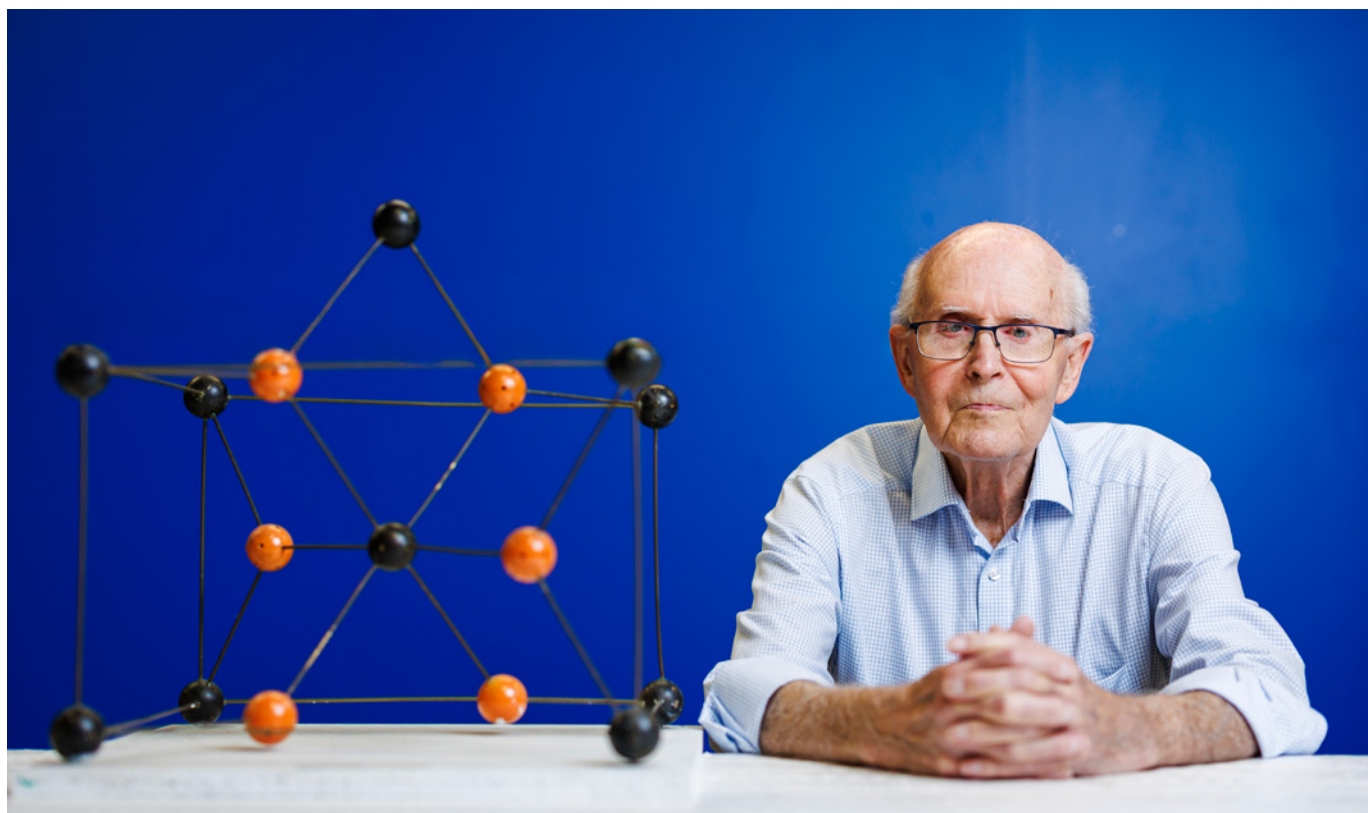
Pathways to impact

Our research is driven by curiosity, the pursuit of excellence, creating opportunities and solving big challenges facing our region and the world.

Our Research Strategy identifies four interconnected pathways, outlined below. Pathways to impact vary across disciplines, teams and projects.



Nobel Prize highlights research and teaching nexus



Professor Richard Robson's career is a powerful example of how teaching and research can feed each other in unexpected and transformative ways. In the early 1990s, working at the School of Chemistry, Professor Robson pioneered a new class of molecular materials known as coordination polymers, now widely referred to as metal-organic frameworks (MOFs). This groundbreaking work reshaped modern chemistry and, in 2025, led to his acceptance of the Nobel Prize in Chemistry.

MOFs are a new class of solids being developed into gas and energy storage devices, catalytic reactors, and other potentially revolutionary products.

The idea, however, began decades earlier – not in a laboratory, but in the classroom. In 1974, Professor Robson was asked to build large wooden models of crystalline structures for first-year chemistry lectures. As he replaced traditional balls and rods with molecules and chemical bonds, a radical thought emerged. More than a decade later, he tested the idea at the bench, creating a crystal with diamond-like connectivity – yet more than half of it was liquid.

By replacing rigid chemical bonds with molecular rods, Professor Robson introduced something completely new into crystalline structures: space. This innovation allowed substances to move through a framework and be chemically transformed along the way.

Looking back, Professor Robson describes the period as pure joy. “I felt elation,” he said. “All of this was play, it was enjoyable. From the late 80s to the 2000s when I retired, every day was terrific. I couldn't wait to come in.”

A lecturer and researcher at the University of Melbourne since 1966, his commitment to teaching and mentoring has never wavered. Just hours after learning of his Nobel Prize, the 88-year-old was back where it all began – teaching first-year science students.

Outstanding education

The Faculty's Education Strategy leverages the diversity of our campuses, learning environments, scientific disciplines, industry partners and world-class academics to create distinctive education programs for our students.

Our programs will continue to provide students with transformative opportunities to study alongside world-leading researchers and educators. We will ensure our students develop disciplinary expertise, as well as the skills and knowledge to succeed in a wide range of career pathways in an ever-evolving professional landscape. We will equip them to answer fundamental questions and solve the world's changing problems, with education steeped in the latest research and rich Indigenous knowledge.

Priorities

- **Research-connected education** – Strengthen connections between our world-leading research and education to create more opportunities for students to engage with the latest discoveries and innovations.
- **Experiential learning** – Provide active experiential learning opportunities that deepen understanding and equip students to collaborate, innovate, and apply their knowledge in real-world contexts.
- **Relationship-rich education** – Prioritise student connections and relationships with their peers, staff and the University to enhance their passion for learning, engagement, sense of belonging and future success.
- **Future ready graduates** – Ensure our graduates have the knowledge, leadership and professional skills to continue learning and to succeed in a rapidly changing world. Fostering flexibility to pursue a wide range of careers, including many yet to be imagined.

Pathways to impact

The Education Strategy is enabled by continuous investment in the core mission of teaching and learning, and foundational projects identified by our staff and students. By investing in our teaching practices, streamlining ways of working, and grounding our work in staff and student experience, we continuously strengthen our capacity and capability.

The foundations of *Enable*, *Develop* and *Innovate* will ensure our education mission comes to life.



Enable

Foster a culture where high-quality education delivery is connected to our scientific and pedagogical research, and the contributions to educational excellence by academic and professional staff are celebrated.

Ensure our teaching and learning spaces facilitate innovation and our excellent student experiences (including cutting-edge laboratory experiences) are sustainable, designed for inclusion and access, and support informal and collaborative learning and co-curricular activities.

Build on a common understanding of the activities that constitute highly effective and experiential learning, including in the classroom, laboratories, clinical settings, field trips and as part of work-integrated learning opportunities.



Develop

Nurture a diverse, inclusive and equitable educational environment that enables all our students to develop and thrive.

Create meaningful opportunities for academic and professional staff to develop as excellent and engaging educators and contribute to the Faculty's educational vision and purpose.

Reward and celebrate contributions to educational excellence across the Faculty. Actively promote connections and relationships, a global mindset and a strong cohort experience for our students.



Innovate

Offer our students educational programs that incorporate the best available evidence-based practices and make innovative use of contemporary techniques, tools and technology.

Emphasise both disciplinary depth and interdisciplinary breadth to ensure our graduates are future-ready.

Deliver programs that enable students to build advanced scientific competencies, including current and emerging digital technologies.

Continue to integrate and elevate the important contributions of Indigenous knowledge systems and Indigenous knowledge holders in our research and education.

Maintain a focus on embedding the principles of sustainability in our teaching and learning practices, including green and sustainable laboratory initiatives.

Continue to widen participation and support diverse student groups.

Encourage feedback from our students to monitor how successfully we are achieving our strategic goals, improving student experience, and meeting student needs.

Finding rare animals and new friends on remote fieldtrips



Third-year undergraduate zoology students on a field trip in the Daintree. Photo by Tara Jalali.

Fieldwork is the ultimate real-world experience for aspiring zoologists or ecologists, and for Dr Tyrone Lavery, a wonderful opportunity for students to build friendships while learning about our planet and its fascinating lifeforms.

Growing up, Dr Lavery spent lots of time outdoors exploring nature – and still does, as a researcher and lecturer in native vertebrate biology in the School of BioSciences at the University of Melbourne.

Dr Lavery explores the evolution and distribution of mammal species, how they interact with their environments, and how we can conserve them. He loves tracking down rare mammals in remote parts of Australia and the South Pacific, such as a critically endangered, giant, coconut-cracking rat species found on only one island (Vangunu).

“Wherever possible, I use my research to support the aspirations of Indigenous peoples, and to complement their existing deep knowledge with other scientific practices, helping to protect habitat from mining or logging,” Dr Lavery said.

Dr Lavery shares his research passions with students in the third-year undergraduate zoology course Field Ecology, built around a week-long field trip undertaken in remote environments like the Daintree Rainforest of Northern Queensland.

Collaborating in teams, students design and execute a research project around a question or problem in ecology or evolution, gaining hands-on experience in field methods and the practical and ethical constraints of working with wild animals. Students apply statistical methods to analyse their data, and report on their results in written and oral formats, referring to relevant scientific literature.

Reframing mathematics through Indigenous pedagogy



Photo by Foundation Maths student Neve Ringk, taken while exploring “maths in nature” as part of the curriculum. Used with permission.

In the School of Mathematics and Statistics, Dr Sally Kuhlmann is rethinking how mathematics is taught, with a focus on connection, agency and belonging.

Dr Kuhlmann designs and teaches mathematics to Indigenous students in the Bachelor of Science (Extended), grounded in the idea that maths is not a fixed body of knowledge to be ‘delivered’, but a creative human endeavour that spans cultures and time. In her classes, she creates space for students to explore, discuss, and contribute their own perspectives, shifting the learning experience from a transactional model to one that values curiosity, creativity and shared learning.

A key innovation is the way assessment is used to deepen reflection. Dr Kuhlmann has adapted assignments into two parts: a traditional problem-solving component, alongside a reflective component that invites students to engage with broader questions, such as whether maths is invented or discovered, and how culture and values shape the way knowledge is framed.

Students also explore maths in the world around them – including by photographing mathematical patterns in nature – helping them see relevance beyond the classroom.

Dr Kuhlmann’s approach demonstrates how Indigenous pedagogy can strengthen teaching for all learners, making mathematics more engaging, inclusive, and connected to the real world.

Diversity and inclusion

The Faculty of Science is committed to being an organisation of choice for staff and students, driven by our strong focus on equity and inclusion for all members of our community. We will enable our people to thrive, fostering strong networks and creating a culture where diverse voices are heard and valued.

There are four key themes guiding this work, informed by our current staff profile and the lived experiences of different cohorts within our Faculty.

1. Commitment to senior academic equity and strengthening the career pipeline for women and gender-diverse staff, ensuring greater representation. We accept this is a first step of many. Diversity in leadership is critical to embedding diverse perspectives, while also providing visible role models for future generations across all areas of science.
2. Recognise that an inclusive culture within our staff community is essential to achieving excellence in both education and research.
3. Advance more inclusive teaching practices, ensuring that every student can thrive through equitable learning environments and stronger connections. This includes students with a disability or neurodivergence.
4. Educate all stakeholders on best practice in inclusive recruitment.

To ensure continued progress towards greater equity and inclusion by 2030, we have identified a suite of strategic goals in support of each theme. These will improve the participation and experience of under-represented communities within our Faculty.

We will make diversity and inclusion a cornerstone of the Faculty by working across schools and Faculty levels, as well as dedicated reference groups, to drive positive change and ensure diverse voices are heard and valued.

Themes			
Senior academic equity	Inclusive culture	Inclusive learning	Inclusive recruitment
Strategic Priorities			
Increase gender equity at senior academic levels.	Increase the active participation and inclusion of gender-diverse staff and students within the Faculty.	Increase focus on ensuring teaching and student experience is inclusive and accessible for students with a disability or neurodiversity.	Advance equity and inclusion in promotion, recruitment and on-boarding practices across the Faculty.
Goals			
<ul style="list-style-type: none"> • Increase the proportion of women and gender-diverse academics to 45% at Level D and 30% at Level E by 2030 (up from 25%). • Support programs to enhance visibility and impact of women's careers, including career development and outreach for schools and community groups. • Enhance mentoring programs to develop networks between early and mid-career academics and foster integrated academic-professional networks that enable collaboration. 	<ul style="list-style-type: none"> • Deliver targeted career development and communications support to increase the visibility and impact of gender-diverse staff across the Faculty. • Provide training and resource materials to promote building a more inclusive culture. • Develop mechanisms to understand and measure experience and belonging for gender-diverse staff and students. 	<ul style="list-style-type: none"> • Develop a program in collaboration with Associate Deans' Undergraduate and Graduate programs to support schools to improve the inclusiveness and accessibility of their teaching. • Improve sharing and communication of best practice resources for inclusive teaching. • Scope additional academic and wellbeing supports for neurodiverse students. • Strengthen feedback mechanisms to better understand student perspective on their Faculty of Science experience in terms of inclusion, accessibility and support. 	<ul style="list-style-type: none"> • Deliver training to all staff participating on recruitment panels, with a focus on inclusive and unbiased selection practices. • Provide targeted training for all decision makers involved in promotions, secondments and other opportunities on unconscious bias, performance relative to opportunity (PRO), responsibilities of panel members and equitable assessment processes. • Enhance communication of best practice on inclusive workplaces through internal and external platforms.

Training academics to shine at communications: the GEMS program



Deputy Dean Professor Todd Lane pictured with some of the 2024 GEMS graduates.

Since 2022, the Faculty's Gender Equity Media Support (GEMS) program has trained 50 early career women, trans and gender-diverse academics to enhance their communication skills and public profiles.

Our aim is to grow the pipeline of diverse future leaders who can compellingly convey the value of their research to media, government, industry and community audiences. The Heads of School nominate the program participants – up to two from each of our seven schools, annually.

Produced by the Faculty's Strategic Communications team, the program includes an overview of the media sector, development of customised key messages, mock radio and television interviews, workshops on persuasive writing and storytelling for research promotion and grant applications, and social media training.

The Strategic Communications team also seeks reputation-building opportunities for GEMS participants, including media releases, *Pursuit* and Faculty website articles, social media, or internal communications.

We encourage them to enter the Big Science Pitch, a Faculty-funded competition with a prize pool of \$110,000 to kick-start bold research ideas.

Feedback from participants has been overwhelmingly positive, including the following:

"I enjoyed the small group of like-minded people, feeling supported in my career development, and meeting fantastic professional staff." Anonymous survey respondent.

"The program changed the way that I discuss my research, helping me to really emphasise its impact and the "why should you care" factor. I doubt I would have been successful in securing my Researcher Development Grant from the Faculty without the GEMS program." Carol Hua (Chemistry)

"I appreciated the media training experiences, the feedback from the experts, and the friendly atmosphere." Nadeeka Wawegama (MVS)



Indigenous

The Faculty of Science is committed to creating a culturally safe and welcoming environment where Indigenous staff and students can thrive, and to increasing Indigenous participation and leadership across all areas of the Faculty.

We will build and strengthen respectful, reciprocal partnerships with communities and recognise the ingenuity of Indigenous science in our teaching, learning and research. Our strategic initiatives are founded on: Place, People, Community and Knowledge.

A strong sense of **Place** is a key part of Indigenous knowledge systems. We strive to embed Indigenous cultural recognition across our physical and intellectual spaces to create a welcoming environment that celebrates Indigenous people's rich heritage. This includes supporting truth-telling initiatives, creating accessible spaces that reflect Indigenous cultures, and confronting historical injustices.

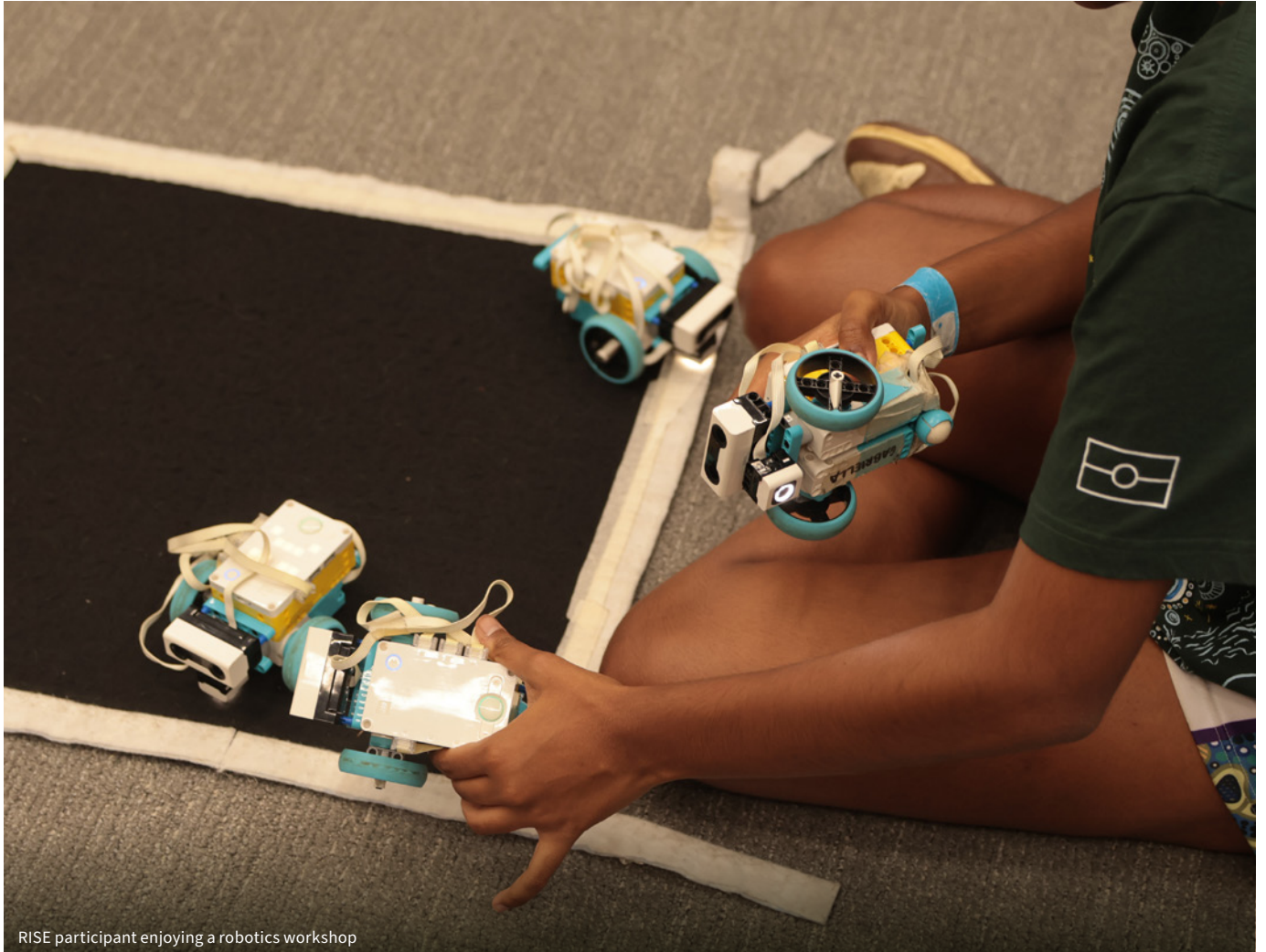
People are central to the benefit we can have to society. Increasing Indigenous participation, retention, and success across all levels of employment and study is crucial. We have ambitious targets to grow Indigenous representation among our staff, exceeding population parity. This includes ensuring equity in career progression and nurturing Indigenous leadership.

Connection with **Community** inspires and grounds us, ensuring that our activities are collaborative and deliver tangible benefits to Indigenous peoples. Building strong, meaningful partnerships with Indigenous communities, organisations, and knowledge holders locally and internationally, ensures our teaching and research endeavours are culturally responsive, globally relevant, and based in reciprocity.

With millennia of experience as the continent's first scientists, Indigenous **Knowledge** inspires what we do. We recognise the deep and ongoing contributions of Indigenous peoples and are committed to fostering respectful engagement and integrating Indigenous knowledge across our research and teaching. By supporting Indigenous researchers and fostering a more holistic and inclusive approach to scientific inquiry, including respect for Indigenous data sovereignty and research governance, we aim to create a richer and more diverse scientific community that benefits all.

Themes			
Place	People	Community	Knowledge
Strategic Priorities			
Create a culturally safe, inclusive, and welcoming environment for Indigenous staff and students by embedding Indigenous cultural recognition across our physical and intellectual spaces.	Increase Indigenous staff and student participation, retention, promotion, and success across all levels of employment and study, while fostering a supportive and inclusive environment that values Indigenous knowledge and perspectives in science.	Build strong, meaningful partnerships with Indigenous communities, organisations, and knowledge holders both within Australia and internationally, to inform our teaching, research, and outreach activities.	Recognise the deep and ongoing contributions of Indigenous peoples to scientific knowledge to foster respectful engagement with Indigenous perspectives.
Goals			
<ul style="list-style-type: none"> Enhance the cultural safety of campus environments. Advance truth-telling and institutional accountability. Foster strong, respectful, and reciprocal partnerships with Traditional Owners and communities where our campuses are located. Build cultural awareness and capability across the Faculty by providing ongoing learning opportunities. 	<ul style="list-style-type: none"> Enhance Indigenous student outcomes by increasing participation, retention, and success. Strengthen Indigenous staff representation. Promote equitable career progression by implementing targeted development, mentorship and leadership opportunities for Indigenous staff, and strengthening Indigenous leadership and decision-making across the Faculty. Advance Indigenous leadership and influence in scientific research, education, and policy. 	<ul style="list-style-type: none"> Establish and sustain respectful, reciprocal partnerships with Traditional Owners and Indigenous knowledge holders. Identify and enable secondment and partnership programs with Indigenous-led organisations. Build and strengthen international relationships with Indigenous peoples and research institutions. Champion Indigenous knowledge systems in education, research and outreach. 	<ul style="list-style-type: none"> Embed Indigenous knowledges, perspectives and methodologies across curricula. Support and elevate Indigenous researchers and research by providing meaningful support for Indigenous scholars and research initiatives. Foster collaborative research with Indigenous communities by building respectful and reciprocal partnerships. Build researchers' capacity for effective and respectful community engagement.

Strengthening pathways for First Nations students



RISE participant enjoying a robotics workshop

For more than 15 years, the Faculty of Science has welcomed Aboriginal and Torres Strait Islander secondary students to campus through the Residential Indigenous Science Experience (RISE) – a flagship outreach program inspiring the next generation of First Nations scientists.

Each year, Year 9 and 10 students from across Australia travel to Parkville to immerse themselves in hands-on science, technology, engineering and mathematics (STEM) learning. Living on campus like university students, they take part in workshops, meet researchers, and build connections with Indigenous university students and First Nations scientists who share their experiences and pathways into science.

RISE is led by a dedicated Indigenous STEM Outreach team in the Faculty of Science, with contributions from the Faculty of Engineering and Information Technology and support from the University's Murrup Barak team.

The program celebrates the innovation and ingenuity of First Nations knowledges alongside contemporary science, creating a culturally safe environment where students can see themselves reflected in STEM and begin to imagine university as a place they belong.

Since its launch, more than 450 students have participated, with many progressing to further study and returning as mentors, building a powerful cycle of representation and leadership.

By removing financial barriers and fostering confidence and connection, RISE is strengthening pathways for First Nations students into higher education and STEM careers.



RISE Mentor Jakobi demonstrating weaving techniques to a RISE participant.

Environment and sustainability

The Faculty of Science is deeply committed to action on the environment, sustainability and biodiversity in all our work, from our everyday actions and operations to our long-term impact.

We are committed to protecting and restoring healthy ecosystems, acknowledging their importance for human and animal health and the environment.

By 2030, we will further strengthen our position as a leader in environmental sustainability by advancing research on climate change, biodiversity and the energy transition. Our ambitions in research include a healthy planet, understanding and adapting to climate change, biodiversity and a renewable energy future. Integrated with an authentic and respectful connection to place and Indigenous knowledges, our Faculty is uniquely placed to enhance our resilience to a changing climate.

Noting the University’s commitments in its Sustainability Framework and Sustainability Plan 2030, we are mindful of the unique opportunity to apply our own scientific expertise to our campuses, facilities and operations.

We will embed sustainability into daily life and enhance our resilience to a changing climate. Our expertise in sustainability and green futures enables us to advise on and advocate for high-performance buildings and sustainable campus development.

Through collaboration between students, staff and partners, we will drive sustainability action at scale. We will learn from Indigenous knowledge in ecological stewardship, promote conservation, and foster shared responsibility across our community. Our Faculty’s presence across five campuses enables us to create living laboratories, to model and test sustainability practices and solutions, and to invest in sustainable infrastructure and climate-resilient ways of working, all while contributing to globally impactful research and innovation.

Themes		
Environment impact research	Living sustainably	Building climate resilience
Strategic Priorities		
Strengthen research focused on climate change, biodiversity loss and the energy transition.	Foster respectful and authentic connections to our places of study and work.	Enhance our future resilience to climate change.
Goals		
<ul style="list-style-type: none"> Enhance and use expertise in climate change, biodiversity loss and the energy transition sciences through targeted support and recruitment. Enhance Indigenous guided environmental and sustainability research, recognising the role of traditional knowledges in ecological stewardship. Promote and expand the Faculty’s research contributions to conservation. 	<ul style="list-style-type: none"> Support students and staff to live and work sustainably on campus. Support student-led sustainability initiatives and networks that promote action, peer learning and science-informed engagement across the Faculty. Deliver research-informed, on-campus biodiversity and sustainability experiences. Establish an Indigenous-led ‘caring for country’ course and resources. 	<ul style="list-style-type: none"> Explore and promote climate resilience opportunities, green lab practices, energy efficiency, waste reduction and procurement. Collaborate with student and staff groups to broaden the impact of the Faculty’s annual Sustainability Week. Advance sustainable travel and transportation infrastructure, including electric vehicle charging, including at our regional campuses in Dookie, Creswick and Werribee.



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Future-ready infrastructure

Across our campuses, the Faculty will deliver sustainable, flexible infrastructure that positions us at the forefront of global research and education.

We are committed to delivering infrastructure across our metropolitan and regional campuses that is fit for purpose, future-ready, and supports world-class research and education.

Our precincts will thrive as hubs of collaboration and innovation. Our campuses house environments where students, staff and partners can work side by side, share knowledge, and develop new ideas. We strive to provide infrastructure that is sustainable, adaptable and globally competitive, enabling discovery, innovation and education with real and lasting impact.

Research and education increasingly rely on spaces that are adaptable, digitally enabled, and designed for collaboration across disciplines. Each of our campuses has unique strengths: Burnley's horticultural expertise, Werribee's veterinary sciences, Dookie's agricultural platforms, Creswick's environmental and ecological focus, and Parkville's heritage and reputation for STEM excellence.

Together, they form an unmatched opportunity to showcase our disciplinary strengths while working closely with regional and industry partners. Realising this potential will require targeted investment, renewed facilities, and clear strategies tailored to each location.

We also face challenges: many existing facilities are ageing and no longer meet modern teaching or research needs. Global competition for talent means we must provide an environment that attracts and retains the best students, researchers and staff.

Through an approach that integrates diligent investment, sustainability, strong governance and a focus on modern interdisciplinary spaces, the Faculty's infrastructure will position us as global leaders.

Themes				
Future-ready infrastructure	Campus excellence	Partnership and engagement focus	Sustainable infrastructure	Infrastructure governance
Strategic Priorities				
Working with central teams, deliver culturally safe, fit-for-purpose, future-ready infrastructure that supports globally recognised scientific research and education.	Position regional and metropolitan campuses as centres of excellence aligned to strategic discipline strengths and community engagement.	Develop infrastructure that enables co-creation and commercialisation through partnership with industry, government and the community.	Ensure all infrastructure projects actively contribute to the University's carbon neutrality goals and climate resilience commitments, environmental responsibility, and long-term.	Enhance the Faculty's capacity to inform and support capital projects efficiently, transparently, and in alignment with strategic priorities.
Goals				
<ul style="list-style-type: none"> • Design discipline-specific, flexible laboratory environments that facilitate advanced research and contemporary pedagogies. • Enable interdisciplinary collaboration through adaptable, reconfigurable teaching and research spaces. • Develop integrated infrastructure and estate planning that anticipates future research platform requirements and digital transformation. 	<ul style="list-style-type: none"> • Establish Burnley as the national leader in plant science and horticulture research and education. • Advance Werribee as a premier hub for veterinary science research and training. • Broaden the teaching and research footprint of the Dookie campus. • Optimise use of the Creswick campus in alignment with Faculty strategic directions. • Develop campus strategies identifying infrastructure requirements. 	<ul style="list-style-type: none"> • Establish innovation and co-working spaces that support partnership with external stakeholders. • Create shared-use, incubator-style facilities to enable translational research and entrepreneurship. • Promote access to specialist platforms that facilitate cross-sector collaboration, commercialisation and strategic partnership. 	<ul style="list-style-type: none"> • Align new builds and refurbishments with institutional sustainability and environmental design standards. • Incorporate climate-resilient infrastructure such as solar, water recycling, green roofs, and smart controls into capital projects. • Promote long-term adaptability and environmental responsibility across the Faculty's asset portfolio. 	<ul style="list-style-type: none"> • Optimise processes for the delivery of minor and major works projects to ensure timely, cost-effective, and high-quality outcomes. • Implement phased delivery strategies to minimise disruption to core teaching and research operations. • Maintain robust governance structures that ensure accountability, local stakeholder input, risk mitigation, and strategic alignment with Faculty and University priorities. • Integrate infrastructure planning and reporting with business systems to improve oversight, forward planning and lifecycle management.

Global engagement

The Faculty of Science holds a unique place in the global landscape and is committed to strengthening its reputation as a globally connected, visible and trusted science partner.

We aim to attract outstanding students, staff and collaborators from around the world, deliver impactful international research, and build enduring partnerships that advance both science and the wider community.

To enable strong global recognition and advancement, our 2030 goals centre on three key pillars: growing international education programs, strengthening our research and related collaboration, and improving the international student experience.

Our strategy focuses on building a foundation of international dual degrees and articulation pathways in priority countries, developing these into a proven model for growth and diversification. Leveraging our world-class research strengths and global reputation will be key to attracting leading institutional partners.

Our strategic priorities will help guide us through a time of geopolitical uncertainty and regulatory change, both in Australia and in key partner countries across the Asia-Pacific. We are navigating intensifying global competition for international students and research partnerships, particularly in STEM. Succeeding in this environment requires our program design and delivery to be agile and responsive.

This approach will ensure the University of Melbourne Faculty of Science is synonymous with quality and opportunity across key global markets. Our students will move seamlessly across borders for education and research, and our partnerships will deliver mutual benefit, global visibility and sustainable new revenue streams.

Themes		
International diversification	International research	International student experience
Strategic Priorities		
Diversify and expand international education programs.	Strengthen global research and increase visibility of our global impact.	Enhance the international student experience across the lifecycle.
Goals		
<ul style="list-style-type: none"> Build on our success in India to expand international enrolments through strategic programs (e.g. BSc Blended and BSc Advanced Honours). Drive international student market diversification, strengthening our reach in under-represented countries. Deepen engagement with Indian partner institutions through visibility, outreach, and local presence. Improve conversion rates through tailored and supportive pre-admission engagement strategies. 	<ul style="list-style-type: none"> Promote research collaboration with high-impact international academic partners, industry and government. Use international research stories (impact case studies) to build brand and attract students, funders, and collaborators. 	<ul style="list-style-type: none"> Strengthen the international student experience from pre-admission through to post-arrival and on-campus integration. Foster a strong sense of student belonging within the Faculty, especially for under-represented groups, by aligning with Faculty-wide diversity and inclusion efforts. Support initiatives that identify and reduce experiences of racism and exclusion among international students. Collaborate across Faculty portfolios to embed student voices and promote inclusive classroom and cohort experiences.

Adapting to survive: research uncovers resilience of Pacific Island communities



Coastal erosion in Nagigi Village, Fiji. Photo by Celia McMichael.

Shifts in our climate and environments are presenting measurable and growing risk to people's lives and livelihoods.

In the Pacific Islands, rising tides and coastal flooding are eroding coastlines. Fish populations and coastal ecosystems, which are central to people's livelihoods and food security, are under threat. More frequent extreme weather events threaten people and homes.

In the face of these challenges, people are making major adjustments to the way they live, work and source food.

Head of the School of Geography, Earth and Atmospheric Sciences, Professor Celia McMichael and her team are investigating the changing nature of coastal environments and the communities who live in and rely on them by working closely with small island communities in Fiji.

Their research shows the importance of local adaptation.

"Villages continuously demonstrate how a community can anticipate risks, respond to change and threats, recover from damage and take advantage of new opportunities," Professor McMichael said.

In some communities, women leaders have established aquaculture projects to improve food insecurity and create new livelihoods, while others have temporarily closed fishing grounds to allow fish populations to recover. Mangroves have been replanted to slow coastal erosion, and in some cases, communities are relocating to safer, higher land.

Professor McMichael said that it is important to understand, document and enable adaptation in communities that are under real pressure from climate change and other threats.

"They are collectives of strength, agency and ingenuity. As adaptation efforts scale up across the Pacific, it is important to recognise and support local initiatives," she said.

"What we hope to pursue through this research is increased understanding of adaptation to climate change in the Pacific Islands. Our team is committed to supporting and building capacity among Pacific researchers who have a crucial role to play in a rapidly changing climate."



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